



## 1. Transit

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### O V E R V I E W

This section focuses on City bus and commuter rail transit. It summarizes current local service and existing and future transit needs and concludes with a list of key findings. Most of the information contained in the section is derived from the Tigard Transportation System Plan (TSP), adopted in 2002. More current information is included, if available. The TSP was developed over a two-year period and serves as a Comprehensive Plan associated document. The TSP includes a number of Goals and Policies related to transit. The methodology used to develop recommended implementation measures combined citizen and staff input. Transit is provided to the general population of the City by TriMet. Tigard's special needs population is served by TriMet in addition to other transit providers.

#### **Regional Transit Policies**

Regional Public Transportation Policies included in the Regional Transportation Plan are listed below. These policies and objectives inform and direct the region's planning and investment in the regional public transportation system. Tigard's policies are required to conform to these regional objectives. Put another way, the regional policies are broad statements that provide the framework for Tigard's and other member jurisdiction's local transit planning efforts.

##### **Policy 14.0. Regional Public Transportation System**

Provide an appropriate level, quality and range of public transportation options to serve this region and support implementation of the 2040 Growth Concept.

##### **Policy 14.1. Public Transportation Awareness and Education**

Expand the amount of information available about public transportation to allow more people to use the system.

##### **Policy 14.2. Public Transportation Safety and Environmental Impacts**

Continue efforts to make public transportation an environmentally friendly and safe form of motorized transportation.

##### **Policy 14.3. Regional Public Transportation Performance**

Provide transit service that is fast, reliable and has competitive travel times compared to the automobile.

##### **Policy 14.4. Special Needs Public Transportation**

Provide an appropriate level, quality and range of public transportation options to serve the variety of special needs individuals in this region and support the implementation of the 2040 Growth Concept.

##### **14.4 Special Needs Public Transportation**

Provide a seamless and coordinated public transportation system for the special needs population.

##### **14.7 Special Needs Public Transportation**

Encourage the location of elderly and disabled facilities in areas with existing transportation services and pedestrian amenities.

#### **Tigard Transit System Plan**

Tigard's Transit System Plan (TSP), adopted in 2002, includes a set of goals and policies to guide transportation system development in Tigard. These goals and policies are consistent

with regional policies and represent the criteria that all transit improvements in Tigard should be compared against to determine if they conform to the intended vision of the City. A few of these policies pertain specifically to transit needs:

### **Goal 2 – Balanced Transportation System**

Policy 2: The City shall coordinate with TriMet, and/or any other transit providers serving Tigard, to improve transit service to Tigard. Fixed route transit will primarily use arterial and collector streets in Tigard. Development adjacent to transit routes will provide direct pedestrian accessibility.

Policy 7: Tigard will participate in vehicle trip reduction strategies developed regionally targeted to achieve non-single occupant vehicle levels outlined in Table 1.3 of the Regional Transportation Plan.

Policy 8: Tigard will support the development of a commuter rail system as part of the regional transit network.

### **Goal 5 – Accessibility**

Policy 1: Design and construct transportation facilities to meet the requirements of the Americans with Disabilities Act.

The Tigard TSP also contains ten strategies related to bus transit facilities in the City. These strategies provide the City with priorities in identifying local needs to TriMet. These strategies include additional: peak service hours of operation; express routes; improved user amenities; access to City employment; shopping, and activity and service centers; better transit coverage; and park and ride lots

### **TriMet Transit Investment Plan**

TriMet's Transit Investment Plan lays out the agency's strategies and programs to meet regional transportation and livability goals through focused investments in service, capital projects and customer information. The plan is a rolling five-year plan that is updated annually. The plan is based on long-term goals and strategies developed by Metro, including the RTP.

### **Tigard/TriMet MOU**

In late 2002, the City adopted the Local Service Transit Action Plan. The plan addresses local needs for improved transit services. It was used to identify the City's transit concerns and priorities to TriMet. As an outgrowth of this plan, in 2003, Tigard became the first suburban city selected by TriMet as a target for local service and pedestrian improvements. The three basic goals of the partnership are:

- Improve local coverage (by providing new and reconfigured service)
- Improve access to transit (by providing pedestrian and park and ride improvements)
- Maximize transit ridership.

These goals carry out nearly all the TSP transit strategies, as illustrated below by a recap of progress achieved during the past three years.

## **I N V E N T O R Y**

The TSP calls for a balanced and accessible transportation system, without defining these terms in quantitative terms. Transit ridership presently accounts for approximately 6% of

Tigard PM trips. Altogether, 4,555 weekday boardings took place within the City during fall 2005. According to 2005 data, most transit ridership generated in Tigard is to Portland (53%), with 17% of trips staying within Tigard and 16% destined for Beaverton. {New and additional data on ridership will be provided by TriMet.}

Currently, ten fixed bus routes operate within the City. These routes are summarized in Table 1. Frequent routes provide the backbone of the transit system and are intended to provide high quality service operating at intervals of 15 minutes all day. Route 12 and Routes 76 and 78 combine provide frequent service on HWY 99 and Greenburg Road, respectively. Additionally, three express routes provide service to Tigard residents (12E, 92X, and 95X). These routes, by definition, include a limited number of stops. Coming from Portland, route 95X stops only at the Tigard Cinemas before it begins making regular stops at Walnut/ORE 99W. Also coming from Portland, route 92X does not stop before reaching the Progress Park & Ride station, where it begins making regular stops. Other routes have stops approximately every 200 feet within Tigard. Existing transit headways on the non-frequent bus routes inside the City average 30 minutes during peak commute periods. Two transit centers are located within the City: Downtown and Washington Square. The transit centers are the most active transit stops in Tigard. Map 1 depicts the center's locations, along with current transit routes in Tigard by bus line.

### **Transit Needs**

According to the Tigard TSP, one of Tigard's greatest transit needs in the future will be improving transit service to the southwest portion of the City where much new development has occurred. Other underserved areas are Gaarde Road, McDonald Street, and Durham Road. Rapidly increasing employment and housing creates a much greater opportunity to add productive public transit routing in Tigard, serving these and other areas of the City not currently served by transit. As detailed below, in addition to new and reconfigured service, other City transit-related needs include pedestrian and park and ride improvements that increase access to transit.

### **Tigard/TriMet MOU**

In late 2002, the City adopted the Local Service Transit Action Plan. The plan addresses local needs for improved transit services. This includes identifying priorities for new bus routes based on the needs of low income households, seniors, and youth. It also includes identifying the need for transit amenity improvements, especially sidewalks leading to bus stops. The Local Service Transit Action Plan was used to identify the City's transit concerns and priorities to TriMet. As an outgrowth of this plan, in 2003, Tigard became the first suburban city selected by TriMet as a target for local service and pedestrian improvements. The three basic goals of the partnership are:

- Improve local coverage (by providing new and reconfigured service)
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- Maximize transit ridership

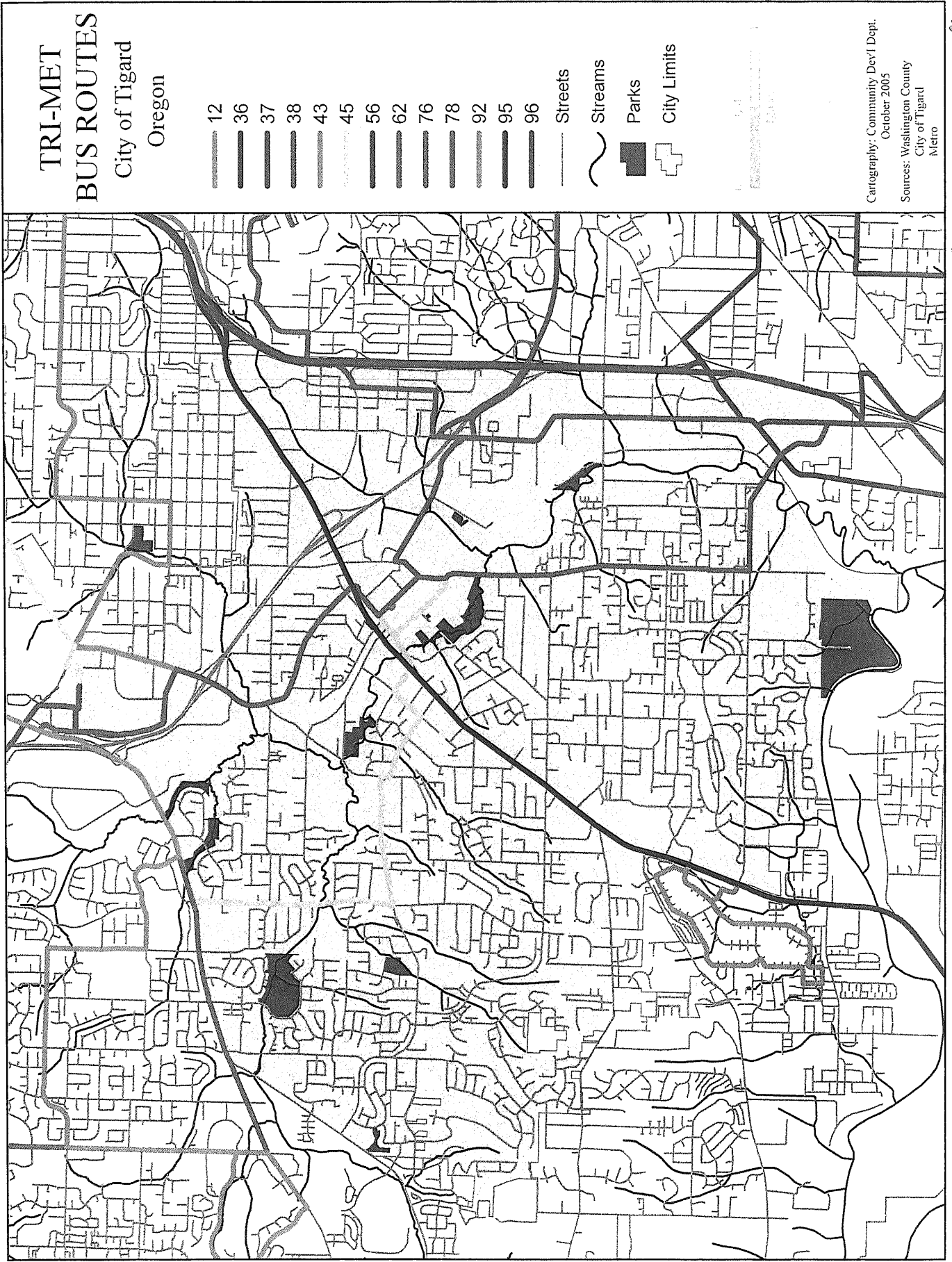
These goals carry out nearly all the TSP transit strategies, as illustrated by the following recap of progress achieved during the past three years under the 2004 Tigard/TriMet MOU.

Figure 1:

Current Tigard Transit Service  
Spring 2004

	Line	Weekday Frequency	Saturday Frequency	Sunday Frequency	Peak hour only?	Start Time	End Time	Efficiency (BR/VH)	*
1	12	15	15	15	N	4:40 AM	12:30 AM	35	
2	76	30	30	60	N	5:30 AM	10:30 PM	32	
3	78	30	30	60	N	6:00 AM	12:00 AM	26	
4	45	20/60	60	60	N	5:30 AM	9:30 PM	19	
5	64X	30			Y	5:45 AM	6:30 PM	32	
6	38	30			Y	6:00 AM	7:30 PM	14	
7	94	15			Y	6:00 AM	7:00 PM	21	
8	95	20			Y	6:00 AM	6:00 PM	17	
9	43	30/60	60	60	N	7:00 AM	8:15 PM	15	
10	56	30	30	30	N	5:30 AM	12:30 AM	27	

\* BR/VH = Boarding rides per vehicle hour



Darren - let's remove the routes on the road  
+ label the routes on the road



## **Commuter Rail**

Washington County Commuter Rail is Tigard's top TSP priority for transit improvements. Commuter Rail will use self-propelled railcars to serve the 14.7-mile stretch between Beaverton, Tigard, Tualatin, and Wilsonville. The \$117 million project will include five stations along the Interstate 5/Highway 217 corridor and have weekday service every 30 minutes during the morning and afternoon rush hours.

The Tigard Transit Center is one of five stations along its route. The Tigard station will have 120 Park and Ride spaces and connect with five TriMet bus lines. The transit project is the first commuter rail in Oregon and one of the few suburban-to-suburban commuter rail projects in the nation. The line will use self-propelled diesel trains to carry passengers between Beaverton, Tigard, Tualatin, and Wilsonville.

In late October 2006, a ground-breaking ceremony, attended by both Oregon US Senators, among many other VIPs, was held at the Tigard Transit Center. According to the US Deputy Transportation Secretary, who spoke at the ceremony, Commuter Rail "puts the metro area on the leading edge of commuter transportation in the United States."

The first phase of Commuter Rail construction, completed in November, involved the removal and installation of track, ties, and ballast along the existing 14-mile line between Beaverton and Wilsonville. The second phase of construction, beginning in 2007, will include intersection and rail station construction, installation of a modern signal system, and the construction of secondary tracks to allow Commuter Rail and freight trains to pass one another. The launch date for service is September 2008. Estimated overall ridership is --- and --- at the Tigard station.

In addition to the new Downtown rail station and new transit option available for local residents, another Commuter Rail component, the Washington Square Station, is of significance to Tigard.

## **Washington Square Station**

While this station is to be located in the City of Beaverton, Commuter Rail will provide access to the Washington Square Mall within the City of Tigard. The Washington Square Station will be served by Line 76 – Beaverton/Tualatin and Line 78 – Beaverton/Lake Oswego. Line 76 is a priority for frequent service in the 2006 TriMet Transit Investment Plan. The Hall Boulevard location was selected over the earlier Scholls Ferry Road location, given its better bus and pedestrian connections to more destinations. TriMet has pledged to continue to partner with both Beaverton and Tigard to plan the station area and, in particular, to develop a safe and convenient pedestrian connection from the regional center mall, across Highway 217 to the commuter rail station.

Priority service improvements identified in the City/TriMet MOU currently are revenue dependent and are on hold until funding can be identified. Illustrative of the current funding problem faced by Transit is that in the 12-month period ending in April, TriMet reduced system-wide hours in which buses and trains were in service by 4 per cent. As another part of the picture, in TriMet's 2007 *Transit Investment Plan*, Fred Hansen points out

that “. . . we will not be able to expand service this year because of the continued slow down in the economy. In addition, the high cost of diesel fuel is stretching our already limited resources.”

The picture regarding local service improvements is as bleak as might be implied by recent events, however. In addition to Commuter Rail startup, three Tigard-specific service improvements are included in the TriMet Transit Investment Plan. Their inclusion is important because it represents an agency commitment to provide the improvements whenever the revenue picture improves and financial resources are available. The three improvements in question are as follows:

1. Frequent Service on Line 76 between Beaverton-Tigard-Tualatin, including potential routing on Hall Boulevard north of Pacific Highway. This is planned to be the next Frequent Service Line. The proposed service would provide a direct connection between Tigard and the Kruse Way employment areas. Line 78 would continue to serve Greenburg Road should Line 76 be rerouted to Hall.
2. Local connections by rerouting Line 38 along Meadows and SW Bonita Road to the Tigard Transit Center and extending another line to cover SW 72<sup>nd</sup> Avenue and Sequoia Parkway. The Line 38 improvement can be implemented without increasing costs to operate the route; however, SW 72<sup>nd</sup> Avenue would lose service. Extending another line between SW 72<sup>nd</sup> Avenue and the Tigard Transit Center would increase operating costs.
3. Service to the Barrows Road area. This would require an extension of an existing Line (potentially Line 92) and a corresponding increase in operating costs. The provision of this service is tied to the proposed extension of Murray Boulevard from Scholls Ferry to Barrows Road. Significantly, this long-planned road project recently has transitioned to design and construction. The impetus for this transition was the land use decision making the extension of Murray Boulevard a condition of approval for the Progress Quarry Regional Center development. Funding is proposed as a public-private partnership, with ODOT contributing approximately \$1 million for project design. Excavation and grading currently are underway and will be completed in November 2007. Full project completion is set for September 2008.

### **Bus Stop Improvements**

The following bus stop improvements were accomplished or initiated by TriMet in 2006.

1. A bus shelter was installed on Main and Scoffins westbound. This stop accounts for an average of 383 weekly boarding rides. This and the other shelter on Main will be removed when new, streetscape designed shelters are installed.
2. TriMet is working with ODOT to receive permits to install four shelters along Pacific Highway:
  - a. Pacific Highway and Royal Villa Dr. – 427 weekly boarding rides
  - b. Pacific Highway and Royalty Parkway – 335 weekly boarding rides
  - c. Pacific Highway and 64<sup>th</sup> – 305 weekly boarding rides
  - d. 11619 Pacific Highway – 161 weekly boarding rides
3. TriMet installed solar lighting in nine shelters along Pacific Highway and one on Main St.:
  - a. Pacific Highway and Durham (NB) – 725 weekly boarding rides
  - b. Pacific Highway and 74<sup>th</sup> – 718 weekly boarding rides
  - c. Main and Pacific Highway – 707 weekly boarding rides



- d. Pacific Highway and McDonald – 630 weekly boarding rides
- e. Pacific Highway and Walnut – 570 weekly boarding rides
- f. Pacific Highway and Durham (SB) – 505 weekly boarding rides
- g. Pacific Highway and Hall – 452 weekly boarding rides
- h. Pacific Highway and 72<sup>nd</sup> (EB) – 345 weekly boarding rides
- i. Pacific Highway and 72<sup>nd</sup> (WB) – 292 weekly boarding rides

## SPECIAL NEEDS TRANSIT

This section addresses steps taken to address Goal 5, Accessibility, in the Tigard TSP. The term TriMet uses to address the population in need of accessible facilities is “transportation disadvantaged.”

Programs operating within Tigard to meet the needs of the special needs or transportation disadvantaged group are outlined below. TriMet estimates that 17% of the people residing within its service area are transportation disadvantaged. This population includes the moderately or severely functionally handicapped and the able-bodied elderly without driver’s licenses. Applying this figure to Tigard’s current population gives an estimate of 4,800 local residents in need of these services.

According to TriMet’s 2007 Transit Investment Plan, the agency recognizes that mobility is an important quality-of-life issue for seniors and individuals with disabilities. Transportation provides independence, community connections, and access to life-sustaining activities. In response to the needs of the transportation disadvantaged, the agency provides accessible fixed-route service and, along with other organizations, operates special para-transit programs within Tigard along with, depending on the service, various other communities.

- **Fixed Route Service:** All TriMet fixed route buses are ADA accessible. This means they either have a lift or a ramp. The low-floor buses have the ramps and all other have the lifts. Ramps are faster to deploy and easier for riders in mobility devices. Every TriMet bus has priority seating near the front for seniors and passengers with disabilities.
- **LIFT** services are door-to-door para-transit provided by TriMet to those who, because of a disability, cannot use or access fixed route transit. Services are provided to all areas of the TriMet service area.
- The TriMet-managed **Medical Transportation Program** dispatches eligible rides to the lowest cost, most appropriate providers through an intergovernmental agreement with the state of Oregon. These rides may be fixed route, or on a medically needed alternative, such as LIFT bus, taxi, or ambulance depending on the needs of the individual. The costs for MTP are fully funded through the State of Oregon Medical Assistance Program.
- **Dial-a-Ride** is a county-wide, door to door service for seniors and people with disabilities operated by the Oregon Trail Chapter of the American Red Cross. Dial-a-Ride operates in the same areas as LIFT as well as areas beyond the LIFT boundary. It is similar in that riders must call and reserve a ride. The programs have different restrictions on how late the ride can be reserved, where they’ll go, and fares. Dial-a-Ride depends on volunteers who donate their time as drivers, escorts and dispatchers. Riders must register with Red Cross prior to receiving service. There is

no charge for Red Cross transportation services. All donations are voluntary. Riders who receive Medicaid benefits support Red Cross transportation services through that program. The vehicles used in the program range from station wagons to mini-buses seating 12 riders. Half of the fleet accommodates clients in wheelchairs.

- **Ride Connection Community Shuttle** is a limited fixed route shuttle for the King City area and door-to-door service for seniors with disabilities. The shuttle operates Monday through Friday from 9:00am to 4:00pm. The great majority of riders hail the shuttle as it approaches them along a circuitous route within King City. It also serves customers living in Summerfield Clubhouse Estates and three local area mobile home parks upon request. Customers can also contact the Ride Connection Service Center in advance to arrange door-to-door service. Destinations for the shuttle include King City Plaza, King City Town Hall, Crown Center, the Safeway and Albertson's grocery stores, and TriMet stops on HWY 99W.

Two special transit programs, both provided by TriMet, that serve low income and employer needs, respectively, include Jobs Access and Transportation Demand Management.

- **Jobs Access** is a federally-funded program that provides on-demand service for low-income (150% of poverty level) people to workforce training sites and places of employment. TriMet administers all funds in the urban metro area for Jobs Access. Ride Connection is the service provider for the Tigard area. It provides roughly 100 (one-way) rides per month to Tigard residents. Most of these rides are to and from workforce training sites. Few commuter rides are provided.
- **Transportation Demand Management** is another program operated by TriMet. A few ago some 21 Tigard businesses participated in this program. Program services include carpool match, vanpool programs, pass subsidies, emergency ride home services, and encouraging employee biking and walking to work. Employee shuttles from transit centers are promoted as another strategy, but no Tigard employers use this strategy at this time.

### **Community Development Code**

Following the adoption of the Tigard TSP, the Tigard Community Development Code (CDC) was not revised to incorporate any of its provisions. This is because the CDC already included transit-oriented provisions with regard to Commercial Zoning Districts and Community Plan Area Standards. Additionally, subdivision development previous to the TSP were required to provide sidewalks, which supports pedestrian access to transit stops.

### **KEY FINDINGS**

- Regional Public Transportation policies and objectives inform and direct the region's planning and investment in the regional public transportation system.
- The Tigard Transportation System Plan, or TSP, was adopted in 2002 and serves as a Comprehensive Plan associated document
- The Tigard TSP contains eleven strategies for the implementation of future transit facilities in Tigard.
- Transit service is provided to local residents by TriMet. Currently, ten fixed bus routes operate within the City.

- In late 2004, the City adopted the Local Service Transit Action Plan. The plan addresses local needs for improved transit services and amenities. In 2003, as an outgrowth of this plan, Tigard became the first suburban city selected by TriMet as a target for local service and pedestrian improvements.
- One of Tigard's greatest transit needs is improving transit service to the southwest portion of the City where substantial new development has occurred. Other unserved areas are Gaarde Road, McDonald Street, and Durham Road.
- Washington County Commuter Rail is Tigard's top TSP priority for transit improvements. The Tigard Transit Center is one of five stations along its route.
- Several programs and services operate within Tigard to meet the needs of the transportation disadvantaged.





## 1. Bicycles

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### O V E R V I E W

This section focuses on Bicycle Transportation and includes three sections: overview, inventory, and key findings.

Bicycle transportation planning in Tigard is subject to compliance with the Oregon Transportation Planning Rule and the Oregon Transportation Plan (OTP, 2006), Metro Regional Transportation Plan (RTP, 2004), and the City of Tigard Transportation System Plan (TSP, 2002). Metro currently is working to update the RTP. The revised RTP, called 2035 RTP, is expected to be approved in November 2007.

The Oregon Transportation Planning Rule 660-12-045 sets forth that:

... on-site facilities shall be provided which accommodate safe and convenient pedestrian and bicycle access from within new subdivisions, multi-family developments, planned developments, shopping centers, and commercial districts to adjacent residential areas and transit stops, and to neighborhood activity centers within one-half mile of the development. . . 'safe and convenient' is defined by bicycle and pedestrian routes, facilities and improvements which: a) are reasonably free from hazards, particularly types or levels of automobile traffic which would interfere with or discourage pedestrian or cycle travel for short trips; b) provide a reasonably direct route of travel between destinations such as between a transit stop and a store; and c) meet travel needs of cyclists and pedestrians considering destination and length of trip; and considering that the optimum trip length of pedestrians is generally 1/4 to 1/2 mile. It follows that 'bikeways' shall be required along arterials and major collectors.

The 2004 Regional Transportation Plan sets forth regional policies pertaining to transportation. The Regional policies addressing bicycle transportation include the following:

**Policy 3.0** Urban Form: Facilitate implementation of the 2040 Growth Concept with specific strategies that address mobility and accessibility needs and use transportation investments to leverage the 2040 Growth Concept.

**Policy 6.0** Transportation and Safety Education: Improve the safety of the transportation system. Encourage bicyclists, motorists and pedestrians to share the road safely.

**Policy 7.0** The Natural Environment: Protect the region's natural environment

**Policy 9.0** Clean Air: Protect and enhance air quality so that as growth occurs, human health and visibility of the cascades and the Coast Range from within the region is maintained.

**Policy 10.0** Energy efficiency: Design transportation systems that promote efficient use of energy.

**Policy 16.0** Regional Bike System Connectivity

**Policy 16.1** Regional Bicycle system mode share and Accessibility

**Policy 19.0** Regional Transportation Demand Management: Enhance mobility and support the use of alternative transportation modes by improving regional accessibility to public transportation, carpooling, telecommuting, bicycling and walking options.

The Tigard TSP contains a set of goals and policies to guide transportation system development in Tigard. The following policies relate specifically to bicycle needs:

**Goal 2 --Balanced Transportation System**

Policy 3: Bicycle lanes must be constructed on all arterials and collectors within Tigard (with construction or reconstruction projects). All schools, parks, public facilities, and retail areas shall have direct access to a bikeway.

Policy 5: Bicycle and pedestrian plans shall be developed which link to recreational trails.

Policy 6: Local streets shall be designed to encourage a reduction in trip length by providing connectivity and limiting out-of-direction travel. Provide connectivity to activity centers and destinations with a priority for bicycle and pedestrian connections.

**Goal 3 -- Safety**

Policy 3: Safe and secure pedestrian and bikeways shall be designed between parks and other activity centers in Tigard.

The TSP contains ten strategies for the implementation of future bicycle facilities in Tigard. These strategies provide the City with priorities in directing its funds toward pedestrian projects.

1. Fill in gaps in the network where some bikeways exist,
2. Connect key bicycle corridors to schools, parks, and activity centers (public facilities, etc.),
3. Develop bicycle network on flat routes,
4. Develop a bike sign program-focus on low volume streets,
5. Bicycle corridors that connect to major recreational facilities,
6. Develop maintenance program to clean bike lanes,
7. Bicycle corridors that commuters might use,
8. Bicycle corridors that connect neighborhoods,
9. Construct all bikeways to City of Tigard/Washington County standards,
10. Bicycle corridors that access commercial areas.

**Inventory**

The TSP identifies two primary categories of bicycle facilities: route facilities and parking facilities. Bicycle ways are categorized as bike lanes, bicycle accommodation, or off street bike paths/multi-use trails. Bicycle lanes, areas within the street right-of-way designated specifically for bicycle use, are the most common route facilities in Tigard. "Bicycle accommodation" refers to bicycles and autos sharing the same travel lanes. Multi-use paths generally are off-street routes shared with other non-motorized modes of transportation. Parking for bicycles is required in the Tigard Development Code (see Section 18.765) for new land use applications.

The main bikeway issue identified in the TSP is the lack of continuity and connectivity. The lack of facilities, or gaps, cause significant problems to bicyclists in Tigard, and lack of connectivity severely limits the utility of bicycles as a safe and convenient travel mode.

The Transportation Planning Rule requires that bicycle facilities be provided on all arterial and collector streets. In order to meet this requirement, the TSP specifically recommends against attempting to retrofit bike lanes on every existing arterial and collector street. According to the TSP, this would create redundant facilities, high costs, and significant right-of-way impacts. Instead, the TSP recommends an alternative design or framework of selected bicycle lanes through Tigard. This recommended framework is depicted in the Bicycle Master Plan. To implement the plan, the TSP identifies a list of 24 Bicycle Project Priorities. As of late 2006, none of these had been completed. One of the 24, Burnham Street, was scheduled for 2007 construction as part of the full reconstruction of that street.

## **KEY FINDINGS**

- The Metro 2004 Regional Transportation Plan identifies bicycling as an alternative mode of transportation that can alleviate regional transportation demand, improve regional air quality, and promote efficient use of energy resources.
- The Oregon Transportation Planning Rule requires bikeways along arterials and major collectors.
- The Tigard Transportation System Plan identifies only three streets within the City of Tigard as having continuous bikeways.
- Lack of facilities, or gaps, cause significant problems for bicyclists in Tigard and severely limit the use of this mode of transportation within the City.
- The TSP recommends a framework of selected bicycle lanes through the City as a practical approach to meeting the Transportation Planning Rule relating to the provision of bicycle lanes.







## 1. Pedestrians

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### O V E R V I E W

This section focuses on pedestrian transportation and includes three sections: overview, inventory, and key findings.

In recent years, as population, CO2 emissions, and fuel costs all have continued to rise, the need for pedestrian facilities has become increasingly more apparent. Walking is the most basic and reliable form of transportation, and in neighborhoods with good pedestrian facilities, walking can account for a significant number of trips. Metro reports that in neighborhoods with good sidewalks and access to transit, for example, more than 20 percent of all travel is by walking. By way of comparison, according to the 2000 Census, 7.2% of Tigard's workforce residents travel to work by walking to their place of work or to a transit stop bus.

Transportation planning in Tigard is subject to compliance with the Oregon Transportation Planning Rule and the Oregon Transportation Plan (OTP, 2006), Metro Regional Transportation Plan (RTP, 2004), and the City of Tigard Transportation System Plan (TSP, 2002). Significantly, all of these framework documents promote walking as an option for short trips.

To lay out this policy framework in more detail, the Oregon Transportation Planning Rule 660-12-045(3) states that "sidewalks shall be required along arterials, collectors and most local streets in urban areas, except that sidewalks are not required along controlled access roadways, such as freeways." The 2004 Regional Transportation Plan, along with establishing a goal of creating "a transportation system that makes walking safe, convenient and accessible to all" addresses the need for continuous sidewalks and safe pedestrian crossings, sets forth a series of policies deriving from the goal.

**Policy 3.0:** Urban Form: Facilitate implementation of the 2040 Growth Concept with specific strategies that address mobility and accessibility needs and use transportation investments to leverage the 2040 Growth Concept.

**Policy 6.0:** Transportation and Safety Education: Improve the safety of the transportation system. Encourage bicyclists, motorists and pedestrians to share the road safely.

**Policy 7.0:** The Natural Environment: Protect the region's natural environment

**Policy 9.0 Clean Air:** Protect and enhance air quality so that as growth occurs, human health and visibility of the cascades and the Coast Range from within the region is maintained.

**Policy 10.0:** Energy efficiency: Design transportation systems that promote efficient use of energy.

**Policy 17.0:** Regional Pedestrian System Policies: Design the pedestrian environment to be safe, direct, convenient, attractive, and accessible for all users.

**Policy 17.1:** Regional Pedestrian Mode Share: Increase walking for short trips and improve pedestrian access to the region's public transportation system through pedestrian improvements and changes in land use patterns, designs and densities.

**Policy 17.2:** Regional Pedestrian Access and Connectivity: Provide direct pedestrian access, appropriate to existing and planned land uses, street design classification and public transportation, as a part of all transportation projects.

**Policy 19.0:** Regional Transportation Demand Management: Enhance mobility and support the use of alternative transportation modes by improving regional accessibility to public transportation, carpooling, telecommuting, bicycling and walking options.

The Tigard TSP also includes a list of goals and policies intended to guide transportation system development in Tigard. The following are the policies and goals pertaining to pedestrian needs:

**Goal 1 - Livability**

Policy 2: Encourage pedestrian accessibility by providing safe, secure, and desirable pedestrian routes.

**Goal 2 – Balanced Transportation System**

Policy 1: Develop and implement public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck and auto use.

Policy 4: Sidewalks must be constructed on all streets within Tigard (with construction or reconstruction projects). All schools, parks, public facilities and retail areas shall have direct access to a sidewalk.

Policy 5: Bicycle and pedestrian plans shall be developed which link to regional trails.

Policy 6: Local streets shall be designed to encourage a reduction in trip length by providing connectivity and limiting out-of-direction travel. Provide connectivity to activity centers and destinations with a priority for bicycle and pedestrian connections.

**Goal 3 – Safety**

Policy 3: Safe and secure pedestrian and bicycle ways shall be designed between parks and other activity centers in Tigard.

Policy 4: Safe and secure routes to schools shall be designated for each school and any new residential project shall identify the safe path to school for children.

The TSP also contains a list of strategies to implement the goals and policies.

1. Fill in gaps in the network where some sidewalks exist;
2. Connect key pedestrian corridors to schools, parks, recreational uses, and activity centers;
3. Coordination of land use approval process to provide sidewalks and links to existing sidewalks;
4. Improved crossings;
5. Pedestrian corridors that connect to major recreational uses;
6. Pedestrian corridors that connect to major transit locations;
7. Pedestrian corridors that connect neighborhoods;
8. Reconstruct all existing substandard sidewalks to City of Tigard standards;
9. Pedestrian corridors that commuters might use.

## Inventory

The Tigard TSP identifies sidewalk continuity and connectivity as key local pedestrian issues. The main reason is the limited number of existing sidewalks along arterial and collector roadways. Another reason is the many older residential subdivisions that include significant sidewalk gaps. These poor pedestrian conditions along arterials, collectors, and older local streets cause safety problems for both pedestrians and vehicles using these substandard streets.

At the same time, pedestrian conditions in newer subdivisions generally are much more walking-friendly. Through the use of code provision requiring hard surface bicycle and pedestrian connections on public easements or rights of way, Tigard's newer or post 1980-era subdivisions were all developed with sidewalks. With regard to the existing network, of which the newer subdivisions form a part, the TSP points out that, if there is a sidewalk available, there will be sufficient capacity. In other words, "it is more important that a continuous sidewalk be available than that it be of a certain size or type."

Overall, the TSP identifies sidewalks on arterials and collectors and connectivity to key activity centers as the most important pedestrian needs in Tigard. It notes that the lack of safe, well lighted arterial and collector streets can act as barriers to pedestrian movement. A safe and interconnected system affords the opportunity to consider the walking mode of travel, especially for trips less than one mile in length.

In addition to an action plan, the TSP also addresses complementing land development actions, gaps in the pedestrian system, parks and trails development, safety, and coordination with Metro's regional 2040 plan. Land use actions impact the pedestrian system. The TSP highlights the importance of connecting new pedestrian facilities with existing facilities in as direct a manner as possible. It also emphasizes the need for residential development to consider the route that children will use to walk to school. In order to address historic gaps in the existing pedestrian system, the TSP recommends the City consider an annual walkway fund to help infill gaps. Because the City Parks and Recreation Department and Metro Greenspaces program are responsible for the majority of off-street trail opportunities in the City, the TSP recommends the two agencies coordinate to provide an integrated off-street walking system in Tigard.

In 2003, the City created a sidewalk set aside in the Capital Investment Program that annually provides \$100,000 for sidewalk infill. Several sidewalk improvements have been completed using this and grant funding sources. In 2006 a second Metro Greenspaces bond measure was passed by the regional electorate. The bond measure's list of regional projects includes three trail corridors partially located inside Tigard. This provides a basis for local-regional cooperation regarding an integrated off-street system, as recommended by the TSP. As of 2006, the City has a GIS inventory of trails, but no GIS inventory of sidewalks.

## **KEY FINDINGS**

- State, regional, and City policies all encourage the provision of sidewalks in order to facilitate walking as a transportation mode.
- City's arterials and collectors and older neighborhoods are substandard and provide deficient pedestrian connections to services and transit
- Poor pedestrian conditions cause safety problems for both pedestrians and vehicles.
- Sidewalks are required of all new development and roadway projects.
- The TSP identifies sidewalks on arterials and collectors as the City's most important pedestrian need.
- In 2003, the City created a fund to infill gaps in the pedestrian system.
- The 2006 Metro Greenspaces bond measure provides funds for trail improvements.



## 1. Movement of Goods

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### O V E R V I E W

Goods and services are transported regionally by truck, rail, air, water and pipeline. Nationally, 78% of domestic tonnage is carried by truck, 16% by rail, and 6% by water. In terms of revenue, trucks account for 88% of revenue nationwide, rail 6%, air 5%, and water 1%. Within Tigard, goods and services are transported by truck, rail, and pipeline locally, but by water and air at the regional level.

The Metro Regional Transportation Plan identifies national and international freight movement as significant contributors to the regional economy, and it is expected that freight movement will play an even larger role in the future. Metro's 2002 Commodity Flow Forecast estimates tonnage moved on the regional freight transportation system will double by 2030, with 60% of the tonnage moved by truck. The regional economy has historically, and continues to be, closely tied to the transportation and distribution sectors. Manufacturing, wholesale trade, and retail trade are the local business sectors that generate the most money in terms of shipments, sales, and receipts.

The region's relative number of jobs in transportation and wholesale trade exceeds the national average; more than 60 percent of all jobs are associated with transportation-dependent businesses such as manufacturing, warehousing, and distribution. In Tigard, manufacturers employ the third highest number of employees among all business types, 2,504 people.

Only one statewide goal relates to the movement of goods: section 8 of the Oregon Statewide Planning Goal #12. This subsection requires local jurisdictions "to facilitate the flow of goods and services so as to strengthen the local and regional economy." This statewide goal is replicated in the corresponding Metro Regional policy that requires member jurisdictions to "provide efficient, cost-effective and safe movement of freight in and through the region" and to "protect and enhance public and private investments in the freight network."

The Tigard Transportation System Plan (TSP) Advisory Committee created a set of goals and policies to guide transportation system development in Tigard. Several of these policies pertain to the movement of goods:

#### *Goal 2: Multi-Modal*

##### *Policy 1:*

Develop and implement public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck, and auto use.

## *Goal 6: Goods Movement*

### Policy 1:

Design arterial routes, highway access and adjacent land uses in ways that facilitate the efficient movement of goods and services.

### Policy 2:

Require safe routing of hazardous materials consistent with federal and state guidelines.

## **Inventory**

### *Trucks*

Principal truck routes in Tigard, as identified in the Washington County TSP, include I-5, ORE 217, ORE 99W and some arterial streets. The local network provides connections with truck routes serving areas within and outside of Tigard, making efficient truck movement and the delivery of raw materials, goods, services and finished products possible. These routes generally are found in and serve areas where there are concentrations of commercial and/or industrial land uses. In general, trucks make up about 2 to 5 percent of the overall traffic at a majority of intersections in Tigard.

Efficient truck movement plays a vital role in supporting Tigard's economic base. Well planned truck routes can provide for the economical movement of raw materials, finished products and services. Trucks moving from industrial areas to regional highways or traveling through Tigard are different than trucks making local deliveries. The transportation system should be planned to accommodate this goods movement need. The establishment of through truck routes provides for this efficient movement, while at the same time maintaining neighborhood livability, public safety, and minimizing maintenance costs of the roadway system.

Through-truck routes are designated to ensure that any future improvements on these roads provide for the safe and efficient movement of trucks. The Tigard Transportation System Plan indicates the objective of route designations is to ensure these routes are "truck friendly", i.e., 12 foot travel lanes, longer access spacing, 35 foot (or larger) curb returns and pavement design that accommodates a larger share of trucks. Washington County's through-truck route designations include existing, proposed and interim through-truck routes. Truck routes in Tigard and Washington County are intended to connect to the regional freight system. The Regional Transportation System Plan identifies the following routes in the regional freight system in Tigard. All are consistent with the City transportation system map.

- |   |                    |
|---|--------------------|
| ▪ I-5, ORE 217, and ORE 99W                         | Main Roadway Route |
| ▪ 72 <sup>nd</sup> Avenue south of ORE 217          | Road Connector     |
| ▪ Hunziker Street east of Hall Boulevard            | Road Connector     |
| ▪ Schools Ferry Road from east of Nimbus to ORE 217 | Road Connector     |

The Tigard Transportation System Plan, adopted in 2002, identifies key differences between the City truck plan, on the one hand, and the truck routes identified in Washington County

TSP and the Metro Regional Transportation Plan, on the other. These discrepancies continue to exist and include the following:

- Hall Boulevard, south of Hunziker Street, and Durham Road, east of Hall Boulevard, are identified as truck routes in the Washington County, but not identified in the TSP. On the other hand, Hunziker Street and 72<sup>nd</sup> Avenue, south of ORE 217, are included in the TSP and Regional Freight System plan, but not the County plan.
- Scholls Ferry Road west of Nimbus and east of ORE 217 to Hall Boulevard and Hall Boulevard from ORE 217 to Hunziker are identified as truck routes in the City and Washington County Plans, but are not so identified in the Metro RTP.

The Tigard TSP identifies other streets in Tigard that, due to their adjacent land uses, should be converted to “truck friendly” streets. Local industrial streets, such as Tech Center Drive and Wall Street, are examples of streets where the local industrial street cross-section should apply. In the future, the TSP proposes that other streets that provide connections to the through truck routes will need to be upgraded to these standards.

### *Railroads*

Railroad tracks traverse the Tigard Planning Area from its northern to its southeast boundaries. The track originates north of North Dakota Street and separates south of Bonita Road, where one track crosses the Tualatin River into Tualatin, and the other turns east into Lake Oswego/Milwaukie and Southeast Portland. North of Tigard, both tracks extend into Beaverton and Hillsboro. Currently, the tracks are operated by one company, the Portland & Western Railroad, a sister company of Willamette & Pacific Railroad and subsidiary of Genesee & Wyoming Incorporated.

### *Air*

There are no airports within the Tigard Planning area. Tigard is served by two airports, both operated by the Port of Portland.

The Portland International Airport is located in Northeast Portland on the Columbia River. The Portland International Airport is a major transportation and freight facility, which serves Oregon and Southwest Washington. Annually, the Portland Airport serves 13 million passengers and handles more than a quarter million tons of air cargo.

Tigard also is served by the Portland-Hillsboro airport, a general aviation facility located in the central portion of the City. The airport sits on 900 acres with two runways and more than 220,000 operations annually. The Port of Portland master plan for this facility was most recently updated in September 2005.

### *Water*

The Tualatin River is located along the southern border of Tigard. It is used primarily for recreational purposes. As such there are no local policies related to this mode of transportation in Tigard.

Although water is not an important means of goods transportation locally, regionally, water transportation is significant. The Port of Portland operates four main marine terminals and is the third largest export tonnage facility on the West Coast. Portland facilities handled more than 11,000,000 short tons of cargo in 2001. Top exports are wheat, soda ash, potash, and hay, while top imports are automobiles, petroleum products, steel and limestone. The Port of Portland is the second largest exporter of wheat in the United States.

### *Pipeline*

There are high pressure natural gas feeder lines owned and operated by Northwest Natural Gas Company along several routes in Tigard.

## **KEY FINDINGS**

- Tonnage moved on the regional freight transportation system is expected to double by the year 2030.
- Principal truck routes in Tigard include I-5, ORE 217, ORE 99W and some arterial Streets.
- The transportation system should be planned to accommodate trucks moving from industrial areas to regional highways or traveling through Tigard.
- Some discrepancies exist between the Tigard TSP proposed truck routes, and the routes proposed in the Washington County Transportation Plan and the Regional Transportation Plan.
- Western & Pacific Railroad owns and operates the railroad track traversing Tigard.
- Portland International Airport and Hillsboro Airport serve the Tigard community and both are operated by the Port of Portland.
- Water is not a transportation mode within the City; however, goods destined for Tigard or goods exported out of Tigard may travel by water through one of the Port of Portland's four marine terminals.
- Northwest Natural Gas Company owns and operates several high pressure natural gas feeder lines.